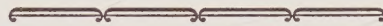


# THE MODERN SCHOOLMAN

*A Quarterly Journal of Philosophy*



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*William A. Van Roo*

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*Editorial*



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## Act and Potency

WILLIAM A. VAN ROO

*St. Louis University*

ACT and potency is the skeleton key to the Thomistic house of metaphysics. It fits every lock in that house—opens to us the mysteries of the fundamental problem of being. In treating so basic a problem I have had to choose between breadth and depth; and, since the purpose of this article is to provide an introduction to the act-potency synthesis, I have chosen breadth: a wide survey of the problem in its chief aspects.

The nature of metaphysical inquiry is generally misunderstood by men who cultivate other sciences. From a chemist comes the objection that we are intruding matter and form where proton, electron, neutron, and other such physical principles suffice; from a surgeon comes the testimony that never in all his experience has he found the human soul. We need not go back to Parmenides, therefore, to find our problem. It is perhaps easier, and certainly more satisfying, to find in contemporary thought the point of departure for metaphysics: and this we can do by taking up the challenge of the physical scientist.

When the chemist has charted the orbits of electrons, and has found within the atom those particles which combine to form all things, ask him: is the electron *being*?—but surely it is not nothing! Well, then, is the proton *being*? And the neutron? Are they all the same thing? But if they are all *being*, how do they differ? And is that difference *being*? Ask the surgeon similar questions. Neither will know what you are talking about. The chemist and the surgeon are unable to deal with *being as being*, just as they are unable to locate matter and form among the particles in the atom, or to perform surgical operations on the soul. There is another science which deals with such questions, a science which they have not studied. Its object is *being as being*. Its name is metaphysics, or first philosophy.

Act and potency is the skeleton key to the house of metaphysics. The positivists and scientists who try to make their physical principles the last word in all discussions have never entered the house. They stand and shout in the courtyard. They have seen only green lawn and concrete, and they mock those who have come from within the house and speak of carpets and polished floors.

There will always be two difficulties inherent in metaphysics. First, it is hard to cross the threshold, to enter upon an inquiry which does not deal with chunks of *matter*. Secondly, it is hard to stay in the house, to persevere in the inquiry, to refrain from using metaphysical principles as if they were physical principles.

### *Three Mysteries of Being*

Our metaphysical "troubles" begin when we inquire into things as *being*. New difficulties arise, as familiar things become mysteries. Three such mysteries set the problem for our present discussion: *change*, *diversity*, and *multiplicity*. Each is a problem in its own right, yet the first two are aspects of the third, and in our necessarily brief treatment it will be best to show how these problems are fundamentally one, and to give the *skeleton key* which fits all analogously. In the resulting synthesis of act and potency we shall see the relation of the notions of potency, prime matter, essence, and substance, which at times is confusing.

1. Few phenomena are more familiar to us than *change*. Changing things confront us on every side: in ourselves, in the men moving about us, in the maple tree now turning red with the autumn. What is this *changing being*, *being* which is itself one moment and something different the next? Where does this new perfection, this new condition, come from? Certainly not from *nothing*, *non-being*. Nor can it come from *being*: if it came from *being*, it already *was*, and could not *become*. How, then, can a thing have successively many modes of *being*, modes which are different, and yet are all *being*? *Being* seems to present itself to our intellect as *one*, a simple concept which fits all things. Change seems unintelligible. Is *being* one and unchanging, and all change illusion? Here we have the mystery of change; and if we consider it carefully, we see that it is a mystery of the one and the many, of one *being* and yet many modes of *being*, which differ, and yet even in their differences are *being*.

2. A second familiar fact is the *diversity* of things. We see the rich variety of a universe of beings which range in perfection from the free electron to *homo sapiens*, so great a variety of natures that no man could ever learn all the species of things. And within each species there is a *distinction* of individuals, all participating in the same nature. I am man, all of me, and I am all that man is essentially. You are man, in all your *being*, and you are all that man is essentially. Yet I am not you; neither of us is any other of the billions of individual men who have lived or now live. Here again is our problem. Whether we regard things as differing in nature or as distinct within the same nature, we face an apparent contradiction: all are *being*, agreeing and differing in *being*; yet *being* seems to be a simple notion, making all difference impossible. It is as if we were trying to explain the constitution



of several different beverages simply in terms of water. All of them are water, entirely water; and all their differences of flavor and strength are likewise water; and we know no simpler things of which water itself is constituted: it is simply water. The problem of diversity and distinction of things is, like that of change, an aspect of the problem of *one and many*: one being, and many different modes of being, all of which are being. Diversity too seems unintelligible.

3. Both change (one being with successive modes of being) and diversity (one being and many modes of being) are aspects of the fundamental problem of *multiplicity*. Any multiplicity of beings seems to be impossible, a contradiction. Being is one, the simplest concept we have. All that we can say about any of the "many" has meaning only in terms of being, the exercise of a *to be*. There cannot, therefore, be many beings, but only one.

Change, diversity, multiplicity: all drive us to this problem: how is multiple being possible? Experience and "common sense" testify to these phenomena, yet our intellect seems to tell us that the testimony is false, illusory. Can we reconcile reason and the data of experience? Or do the data of experience end only in contradiction? We can hold a philosophical position comfortable with experience only if we solve the problem of the one and the many. If we fail to solve it, we shall have to retreat into a monism or idealism or philosophy of flux; and once we sound that retreat, no man can predict where finally we shall take our stand.

### *The Key*

How does Thomism meet the problem? In three short steps we come to the fundamental thesis of Thomistic<sup>1</sup> metaphysics: (1) beginning with the facts of experience, we say that *there are many beings*; (2) many beings can be only *finite beings*—two or more infinite beings is a contradiction: they would not have the fulness of perfection, since each would *not be* the other; (3) finite being must be *composite* being. Here is the basic thesis of Thomism, called the *limitation of act by subjective potency*: Act, in the order in which it is act, is limited only by the potency in which it is received.<sup>2</sup>

The meaning of the proposition is this: every finite being is a real composite, made up of a real principle of

perfection and a real principle of limit, or capacity. Thus finite being is broken down into components, which are not themselves properly *beings*, but which together are *one finite being*. These principles within finite being itself will explain limitation and multiplication, change, and diversity; for they are the intrinsic principles which make finite being possible, and all of our difficulties come from the apparent impossibility of "holding things down" to a limited act of *to be*.

What is the basis for the thesis? How can we be certain that finite beings are *really* composite? Do we not merely think of them as composite, and of the components as distinct?

The limitation of act by potency—in other words, the real composition of act and potency in all finite being—is grounded in the principle of contradiction. It is impossible that the same simple thing be at once perfection and denial of the same perfection. I am being, and not being; I am man, and not man: *not being*, insofar as I am not all the other things that are; *not man*, insofar as I am not the whole species. Being and non-being, man and non-man cannot be reduced to the same principle. There is something in me which makes me man; and something else which holds me down to a mere share in that perfection. There is something in me which makes me *be*: but I cannot say that I simply *am*: I *am such here and now*. Act and potency are the principles of perfection and limit, the "stop-and-go" system of finite being. We simply cannot have traffic in finite being if we are to depend on a signal which has only one word and one color, which says "go" in all directions at all times.

### *The Relation of Act and Potency*

Act and potency, therefore, are the principles of perfection and of limit. They are really distinct: one is not the other, independently of our thinking of them as distinct. All the perfection comes from the side of the act; all the limitation, from the side of the potency, capacity. Potency is the mode, measure, limit of the perfection of finite being.

At this point one may raise the question which is frequently asked: *must* there be an *intrinsic* principle of limitation? Can we not explain the limitation of finite beings wholly from the side of the efficient cause which produced them, and gave them only a limited perfection? First, we do not deny the necessity of the efficient cause as the extrinsic principle of limitation: God does produce finite beings and give them only a certain grade of perfection. But even God cannot do that which is intrinsically impossible: and our task is to explain the intrinsic possibility of finite being.<sup>3</sup>

Our discussion thus far has driven us to recognize a real composition in finite being, a composition which alone makes finite being intelligible, and shows us the intrinsic

<sup>1</sup> This article is representative of *Thomistic* metaphysics understood in the stricter sense, as distinguished from *Suarezian*, *Scotistic*, etc.

<sup>2</sup> A word about the terms: (1) *act* and *potency*. They have their origin in the explanation of change. At first, both were used in connection with the so-called *active potency*, i. e.: the capacity to do something. The man who is seated *can* walk: he has the capacity, the potency to walk. When he walks, he fills the potency, he is *in act* with respect to the potency. In general, potency means *capacity* for some perfection; *act* means the corresponding *perfection*. (2) *in the order in which it is act*: we shall see later the application of act and potency on different levels. (3) The potency usually called *subjective* potency is the real subject, the real capacity in which the perfection is received. Note well, it is a *real* capacity, a *real* principle in the being, not merely that conceivable possibility which is called objective potency. Moreover, as capacity for a perfection, potency is likewise limit upon the perfection: it *can* receive the perfection *only to the limit of its capacity*. This table *can be white*, but only to the extent of its twelve square feet of surface.

<sup>3</sup> Another difficulty is often raised against our position: *must* it be a *potency* which limits the act? Could it not be another act? This difficulty arises from a misunderstanding of how act in one order can be potency to a higher act. This point will be made clear, I believe, in the latter part of this article. It will suffice to say here that act, as act, is never a principle of limitation. We do not limit perfection by adding other perfections.



possibility of limited being. To make finite being intelligible, we require a real composition: but is not the composition itself unintelligible?<sup>4</sup> A finite being is one being. One being is not two beings: a being is not made up of beings. What, then, are these *components* of finite being? Are they being, or non-being? What are they in themselves, and what is their relation to the whole finite being which they form? The issue at this point is vital: if we try to build being out of beings, we are back at our first difficulty, and our prospects of solving the mystery are not too cheering. What are act and potency? How do they together form one finite being?

### *Principles of Being*

Act and potency are not *beings*, but rather *principles of being*. Neither the act nor the potency *is*: together they form a being which *is*. Both are real, but they form one being, and have only one existence, that of the composite. The potency is real, existing, but not by reason of itself. The act is limited, but not by reason of itself. The potency is real and exists by the *to be* which comes to the composite with the act. The act is limited by the potency which it fills. The act and potency forming a finite being are transcendently related: neither can *be* nor *be conceived* separately. Together they constitute the finite being.

Our investigation is particularly difficult at this point because we have narrowed it down to the fundamental act-potency dualism which runs throughout the world of finite being. We cannot hope to understand act and potency satisfactorily as yet: it runs through several types of composition analogously, and only a view of those levels of composition will bring out with some degree of clarity the nature of these principles of being. On the higher levels we can learn more of *act*; at the lowest level we are driven to a principle which is *pure potency*.

How, then, does the act-potency composition run through finite being? We find it on three levels: (1) all multiple, finite being is a composition of two principles on the level of being: that by which the thing *exists*, the act, which is commonly called *existence*; and the potency, capacity, mode of being, that by which the thing is *of such a nature*, which we call the *essence*; (2) being which is multiplied within the same species, e. g. man and all bodily things, have a second composition, a composition *within the essence*, of *matter* and *form*; (3) all finite being, since it is not its own end, must act to attain its end, and hence is potency to a second line of actuation; thus we have the composition of *substance* (the finite being already constituted by its basic act) and *accident* (the second act which comes to perfect the substance).

Since we began our study by reducing all of our difficulties to the problem of multiplicity of being, let us now approach the various strata of act and potency as steps in the solution of that general problem. We shall begin with One Being, God, and consider what is required intrinsically for the multiplication of beings outside of God.

### *Essence and Existence*

"I am Who am."<sup>5</sup> God is pure being, pure *esse*, the fullness of perfection: it is His Essence *to be*, and we cannot define Him, we cannot express that Essence by heaping up perfections. Every such perfection we might suggest is a *mode* of being, and no number of modes of being could ever embrace the Essence of One Who simply *is* without any limit or mode.

How can God produce beings outside Himself? They cannot simply *be*. There must be a limit upon their act of being: and so God makes them not just *to be*, but *to be such*, or *such*, or *such*: to be Gabriel, to be Michael, to be Raphael. And the mode of being, the *suchness* — or Gabrielness, if you please — is the limit upon the act of being. In this manner God can produce as many beings as there are modes of being, and in every such limited being there are two principles transcendently related: that by which the thing *is* (the *to be*, or existence), and that by which the thing is *such* (the essence). All these finite beings may be defined by the essence which is their mode of being, a certain grade of perfection. It is not of their essence *to be*: they are not existence, but they have existence according to their capacity. In all finite beings essence (potency) and existence (act) are real principles of the composite.

### *Matter and Form*

Suppose at this point that the only principle of limitation in creatures is the essence, and the only creatures are such as we call angels, each with a specific nature, a specific mode of being. One has the perfection *to be Michael*; another, *to be Gabriel* (different grades of perfection which we cannot understand because we have no experience of such beings). If now God wishes to manifest His glory more by multiplying beings even within the same essence, how can He do so? Can He create many beings with the same simple essence, for example: many *Michaels*? How would they be distinguished? Remember, the only composition in beings thus far is that of essence and existence: each of these components is simple. Our many Michaels, therefore, would all have exactly the same mode of being, and since there is no way of dividing that simple mode, they would all have it fully. Then we should have to say: the first is Michael, completely Michael, nothing but Michael; and so is the second, and the third: yet the first is not the second nor the third. Michael is Michael, and Michael is not Michael: an evident contradiction. The problem is the same as that which faced us on the level of being: here, in the order of essence, we have a perfection, an act, which is to be multiplied. It must therefore be limited: it must be received in a potency. We must have a new potency, a new limiting principle within the essence, as before we needed a limiting principle within *being*.

And so it is on another stratum that God will multiply beings within an essence, a level at which the essence is shot through with potency, so that the essential act may be multiplied. Up to now we have had only an unlimited Being, God; and many beings limited *to be such*. Suddenly

<sup>4</sup> Compare L. de Raeymaeker, "La structure de l'être fini," *Revue neo-scholastique de philosophie* (1932), p. 190.

<sup>5</sup> Exodus 3.14.



the world of creatures is honeycombed: where before we had only one unlimited *to be* and many limited *to be such*, now we have in addition a new level of beings limited *to be such here and now*; and the whole extended universe is God's device to make this multiplicity possible. You are man *there*, and I am man *here*, and every other man is man *in his own matter*, for we have a composite essence, with a potential principle which is capacity for the reception of its act *here*. All this world of things which have their being in space is the result of this second level of composition.

### Pure Potency

What kind of act and potency do we have here in the composite? The act, principle of the perfection of the species, is called *substantial form*. The potency in which this act is received is called *prime matter*,<sup>6</sup> and its peculiar character is that it is *pure potency*: it has no determination, no perfection of its own; its whole reality is its transcendental relation to form, and since it is wholly undetermined and has no mode of being of itself, it is potency to all forms.<sup>7</sup>

How do we arrive at this notion of pure potency? We are driven to it as the only possible explanation of undeniable facts. This can be understood most clearly by the solution of the problem of substantial change.<sup>7</sup> But we are driven to it with equal certainty by our present problem of multiplication within a species. Remember what is required: the many are to be specifically identical: they are to have the same grade of perfection. Our principle of limitation, or reception, therefore, as the principle of distinction of individuals, can contribute nothing by way of perfection to differentiate them. They are not different (i. e. of different perfection), but only distinct: having the same perfection, one is not the other simply because the same perfection is received in distinct subjects or capacities.

But is not the matter potency to receive the form *here* or *there*? This seems to imply some sort of formal difference. The difficulty arises from the fact that the limiting principle in the bodily substance is *matter as it falls under the accidents of quantity*: only thus is it the principle of individuation. We shall see shortly the relation of matter in the substance to accidents. It is important to note, however, that although individuation within the species flows partly from matter, partly from accidents,<sup>8</sup> the root is matter: for by reason of the matter in a composite substance, the body is in potency to the accidents of quantity.

Here we may note the point which we passed over in

<sup>6</sup> The true meaning of *matter* in this sense is *ultimate substratum*, a wholly undetermined principle of bodily substance: not the matter which we usually think of as coming in chunks.

<sup>7</sup> This wholly undetermined substratum is the potency which explains *substantial change*: it is the subject which passes through change, a wholly undetermined *can be*, potency to any substantial form. Substantial change drives us down to a subject which is wholly undetermined, since the substantial act is the first act, the basic act of the substance. If the matter had any determination of its own, the substantial act would come as a second, and the union would be accidental, not substantial.

<sup>8</sup> In *Boethii De Trinitate*, 4. 2c.

the thesis on limitation of act: an act may be act in one order and potency in another, that is: an act may be potency to a higher act. Thus the human form is act, a certain grade of perfection; likewise the form of any angel or bodily substance. They are act in the *order of essence*, but they are potency in the order of being: in potency to the act of existence. A similar hierarchy prevails in the substance-accident and accident-accident relations, as we shall observe.

Another difficulty is often raised concerning the relation of the notions of potency, matter, and essence: they seem to get in each other's way in the explanation of finite being. Could we not simply speak of potency? Surely we could: potency is the general notion; but the potency of matter is different from that of essence. Matter is potency even in the order of essence: it has no essence; it is not a mode of being, and cannot of itself receive an act of existence. Matter is potency to substantial form. *Together* matter and form constitute the essence (composite). Essence (either simple or composite) is potency to existence. Again note that *form* is act in the order of essence (pure act in the simple essence), but is potency in the order of being (existence).

### Substance and Accident

The third level of act-potency composition, involving a whole network of act and potency relations between substance and accident (fundamentally), and also between accident and accident, we can only indicate here. It is sometimes called the *order of activity*: for finite beings, not being their own end, must *act* to attain their end: the rose must grow; I must vegetate and sense and cognize and will, to attain man's perfection. Thus accidental perfections may be regarded as a new line of actuations to which the substance is potency (in addition to its basic act of substantial existence). If, however, we look at the problem of act and potency from the point of view of multiplication, which we have maintained throughout this article, the substance-accident composition explains the multiplication of accidental perfections: there may be many *whites* because the perfection is received in different subjects.

Without going into the complex relationships on this third level, we may indicate the chief act-potency compositions to be found in any bodily substance. The basic potency is matter, an undetermined substratum, in potency to substantial form. Together they constitute the essence, potency in its turn to existence. Or, looking down from act to potency, the *to be* is received according to the capacity or potency of an essence; this act, for example *to be man*, must be further limited to one of many men within the species; the basic act of the individual man therefore will be *to be man in this matter*. But the bodily substance man is in potency to a second line of actuation, and the accidents which perfect him will flow from the composite nature of his essence. Because he is material, he must be extended, and therefore must have quantitative accidents. Quantity in turn must be determined by other



accidents: figure and various qualities. Flowing from man's form, other qualities and active potencies perfect the substance and are the means of attaining its end. The individual existing man is a whole system of transcendental relations: compositions of act and potency as principles of finite being. Wherever there is a limited act, there is a composition of act and potency. In every case the limited act and the limit upon the act are transcendently related: neither by itself *is*; by their union the composite *is*. Most of the difficulties in conceiving pure potency in the composition of matter and form, and in understanding the other so-called principles of being, result from treating principles as *things*, a frailty of the courtyard which has been called very aptly *chosism*, *thing-ism*.<sup>9</sup> The coordinate principles required intrinsically for finite being are *tempore et natura simul*: neither has any priority of time or of nature. The limited act and the limit upon the act are mutually dependent, and neither precedes the other in any way.

And so we have set our problem, indicating the line of

solution—but have not *solved* it. It is not of the nature of metaphysics to *solve problems*, but rather to *probe mysteries*<sup>10</sup>—or even more accurately, to penetrate deeper and deeper into the one great mystery of being. That mystery is *one*, and, in the root meaning of the word, *profound*—bottomless. Being is analogous: and throughout finite being runs the ever-varying pattern of act and potency, in no two cases the same. Every new experience of reality, every new contact with being, brings a new revelation, another light illumining our darkness. And we shall never *finish* our contemplation of being: it will be our life for all eternity.

<sup>9</sup> R. Jolivet, quoted by L. de Raeymaeker, "La Structure de l'être fini," *Revue neo-scholastique de philosophie* (1932), p. 198.

<sup>10</sup> See Jacques Maritain, *A Preface to Metaphysics*, New York, Sheed and Ward, 1939. *By no means*, however, do we mean that we are not certain of the principles of metaphysics. We hold that the limitation of act by potency, and the real composition of essence and existence, and of matter and form, are certainties. The "mystery" lies in the full significance and extent of these compositions, especially on the level of substance and accident.

## The Supposit in the Inorganic World

JAMES A. McWILLIAMS

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THE occasion of the present discussion is a communication submitted to the writer, and regarded as a precise statement of the most crucial modern problem in Cosmology. It reads:

Modern chemistry and physics are based on the theory of discrete and space-separated protons and electrons in the chemical atoms and in chemical compounds. How can this theory be harmonized with the Scholastic doctrine of the unicity of the substantial form and the essential unity of the atom and the compound? This physical theory, which seems to be well established, apparently demands a separate substantial form for each discrete particle; but that would apparently destroy either the unicity of the form or the essential unity of the atom and compound. There is question here of the *continuum* which most neo-Scholastics demand in a natural body, in order to have a single substantial form.

### *Meaning of Supposit*

The question here raised is: What portions of inorganic substance can be said to be individuals or, more correctly, supposits? In attempting an answer we must begin with the rudiments. A supposit is a real, single, complete substance. When we say *substance* we mean "first substance," the ultimate in the real order, as opposed to "second substance," which is in the conceptual order. When we say

*single* we mean that the oneness is real, not due to any grouping by the mind into one unit, that the unit is such independently of the mind. *Complete* means that all the substantial requisites for the species are present. Completeness is of two kinds: integral, thus a man whose arm has been amputated is integrally incomplete; and essential, thus the human soul after the death of the body is an incomplete human being, an incomplete substance. Here is the difference between individual and supposit; the man is a supposit, but the separated soul, though an individual, is not a supposit.

It is accepted scholastic doctrine that there are supposits not only in the human species, nor only in the animal and plant kingdoms, but in the mineral kingdom as well. In the last named, can we maintain that the atom of an element or the molecule of a compound is a supposit? It must be admitted that we do not get much help from the older Aristotelians, because for them, although the four elements were indeed composed of, or at least could be broken down into, atoms, the *minima naturalia* (Cf., e. g., Aristotle, *Phys.* IV, 187b), these elements, whether in atomic or larger units, were regarded as internally homogeneous. Our modern chemical atoms are internally heterogeneous, composed of qualitatively different integral parts: electron, proton, positron, neutron, neutrino. Insofar then, as we rely on Aristotelian doctrine, we must endeavor to apply old principles to a new state of affairs.



Before attempting a solution of our problem two general observations should be made. (1) A supposit as such is incommunicable, which means that it cannot be a part; two or more supposits, while remaining such, cannot combine as parts of a larger supposit. Two substances cease to be supposits when, in substantial change, they combine into one new complete substance. Thus, if an atom of Cl and an atom of Na are each a supposit, and the molecule NaCl is a supposit, then the atoms cease to be supposits when they combine. (2) It would appear that the more the substantial forms are immersed in matter the more readily, generally speaking, do the substances combine. Hence on the inorganic level, where the forms are most immersed, a change of natural species, and consequently of supposits, is most readily effected.

### Unity of the Molecule

Today both scientist and philosopher admit that even on the inorganic level the atom and the molecule is each a *natural unit*. The simplest atom is that of monatomic hydrogen. The atoms of the other elements are (approximately) integral multiples of the hydrogen atom, helium being four, oxygen sixteen, and so on. While an atom is the smallest chemical agent, a molecule is the smallest unit in a given species, either element or compound. For our present purpose we may simplify our terminology by calling every such unit a "molecule," whether it be monatomic or not. Disregarding, then, all other questions, let us face at once the question of the "discrete and space-separated" particles within the molecule.

There are but two alternatives. Either each molecule is a single supposit, or it is an organized system of many supposits. If a single supposit, then each molecule has a single substantial form; if a system, there are as many substantial forms (co-ordinate, not subordinate forms) as there are supposits in the system. But even if only a system, the system is nevertheless a natural unit; because it is clearly not an artifact, nor a chance aggregate. The unity of the molecule is due to proper accidents within the unit itself, due, therefore, in the last resort to substantial form, one or many. Thus far all agree.

But here an objection is raised: Such a system is only an *unum per accidens*. To answer this objection we need only take note that, strictly speaking, an *unum per accidens* (in the real, as opposed to the logical, order) is a unity brought about by *contingent* accidents, as a heap of rubble. A molecule, however, is a unity effected by *proper* accidents, by the discriminating and limiting forces of the particles themselves, by affinity and valence. The terms "affinity and valence," although usually reserved to atoms, as the agents of chemical changes, are applicable also to the smaller particles with regard to the construction and disintegration of the atoms themselves.

But, it is said, if the molecule is not an *unum per accidens*, then it is an *unum per se*; and an *unum per se* is a single supposit, and our problem is solved. Unfortunately, a single supposit does not seem to be the only

alternative to an *unum per accidens*; or, to put it another way, although an *unum per se* is usually understood to be a single supposit, nevertheless there are cases where it consists of more than one supposit. Thus ethicists, for example, while admitting that a conventional society, as a law firm, is an *unum per accidens*, maintain on the other hand that a natural society (the conjugal or civil society) is an *unum per se*, although it is clear that a natural society is not a single supposit. Hence, when the unit is determined by nature it is an *unum per se*, whether consisting of one individual or many. If this seems to be forcing a new meaning on the term, that is only because the distinction is required by the principles of division. The two types of *unum per se* have this in common that, though they are units, they are not so *per accidens*, and yet they differ as to the number of supposits. There is therefore a "supposital" *unum per se*, and a "systematic" *unum per se*.

Which kind is the molecule? Many writers are convinced that an isolated molecule is a single supposit. To see the reason for this conviction we must first note that heterogeneity of qualities does not preclude supposital unity; for the human being has the greatest heterogeneity of qualities of any known being, and yet is the most certain of all supposits. In fact, only a strict element (which our chemical elements are not) lacks qualitative heterogeneity; so that if homogeneity were required, only a strict element could be a supposit. Hence, although a molecule has different qualities in different parts, that is no argument against its being a single supposit.

### Continuity of the Molecule

However, it is further objected, each of these qualities, restricted as they are to different areas, indicates a different "particle," and the particles are moreover "space-separated." The particles are said in fact to be discrete, and not even contiguous but separated by relatively great distances. It is precisely this space-separation that is the whole point of the difficulty we have been considering. The contention is that no supposit can have space-separated parts.

How, then, do we answer the difficulty? We answer by denying that the molecule is made up of really separated parts. For these particles evidently act upon one another; and if there is not anything whatever between them, or connecting them, we have no choice but to admit action at a distance. But action at a distance is regarded as at least physically impossible by both scientist and philosopher. It is true that experiment has failed to discover any connecting material between the particles, but such failure does not prove its non-existence. What the scientist means by saying that particles are space-separated, is simply that he has not discovered between the particles anything which displays the phenomena of either mass or electric charge. He does not assert that he has proved there is only empty distance there, and that the particles attract and repel one another through no medium whatever. In fact modern writers often employ the term "intra-atomic ether" to indicate the medium which fills the spaces



between the particles. Consequently, despite the expression "space-separated particles," it is admitted that the molecule is *de facto* continuous within itself. It is often, indeed, said that the only "matter" in the molecule is confined to the particles, and that there is no "material substance" between them. But here again the terms "matter" and "material substance" are restricted to material with mass or electrical properties, or both.

If this explanation is tantamount to accepting the existence of the ether, it must be remembered that the ether has never been proved to be non-existent. The Relativists, as mathematicians are privileged to do, may prescind from the ether as unnecessary for their calculations; but prescinding from a thing is not denying its existence. Even Relativity, however, as a physical theory, postulates an ether as a "field" in which the "field equations" are verified. Furthermore, the constant velocity of light, the prime postulate of Relativity, is inexplicable except on the basis

of an ether, because wherever the velocity of radiation is constant, regardless of the velocity of the emitting source, there the constancy must be determined by the medium.

Again, the ether was once said to have no mass, and for that reason was said not to be "matter." But since it is an existing extended something, it is, to the philosopher at least, material substance, whether it have mass or not. More recently ether is said to have a slight mass. In any case, the mass of the ether within the molecule, if it has any, could not, because of the small amount, be readily detected.

It follows that the molecule need not be considered as many supposit. Each isolated molecule may be regarded as a single supposit. Neither do we have to resort to action at a distance to explain how its various parts or "particles" can interact. With every assurance we can, therefore, say that each molecule is really continuous, a single supposit, and has but one substantial form.

## Adler's Problem of Species

### A Critical Review

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IT IS not without a certain reluctance that we face the labor of putting even these few words together on the occasion of Professor Adler's latest book.<sup>1</sup> For one thing, after we had read this work in its original form of a series of articles in *THE THOMIST*, it was almost too much to have to go through the book a second time. For another, the spectacle of hastily committed historicisms, of mishandled texts, of sheer ignorance of the way these very problems have occurred before and of how classic mistakes (many of which are repeated here) have been made—all this is the complexion of the work—is most distressing to one who, with so many others, has wished that the great talent of Mortimer Adler, after proper discipline, would some day mature and bear sound fruit. Instead, the present operation is a notable piece of malpractice.

In a foreword whose every sentence breathes a personal benevolence, M. Jacques Maritain gives two major points of difference from Dr. Adler; only the man who has studied this matter himself (and every one must face it early in his philosophic career) will realize that what Maritain says destroys all of Professor Adler's book, with the exception of his adroit choosing of examples of species and handling of them prior to his having offered any hypothesis upon their character, number, or hierarchy; in fact, Dr. Adler rejoices only that Maritain "has entered into the dialectic of the issue", when what he has really done is to indicate settled matters which make Professor

Adler's book worthless except for occasional argumentative excellences in the field not even of principles but only of particular considerations. Another instance: when the very first article appeared in *THE THOMIST* every serious reader was shocked at the identification of substantial form and species; a beginner knows better. When many people, with a charity that they would not have displayed toward their other colleagues indicated that this was a serious blunder and one which would render the rest of the argument erratic, all that happened was that Dr. Adler added a curious section (pp.12-18 of the book) in which he declared this matter "open"—unsolved (i.e. until he brings out the second *Problems for Thomists* solving it), and even drew a thumbnail sketch of a history (p.15) involving St. Thomas, Avicenna and Averroes, an account which is unintelligible to anyone who has ever read these men. He has been willing to throw out the *Posterior Analytics*, to revise St. Thomas's doctrine of matter and form (which, in some strange way, he does not understand will destroy all the doctrine of being and of act and potency), to consider the present issue not to have been clearly understood by either Aristotle or St. Thomas because both of them tend to let logical considerations too much obtrude,—indeed no purge is too drastic; the one thing Professor Adler has refused to do is ever to reconsider his own position, to submit himself to that discipline without which no man becomes a philosopher. It is important, then, that for the sake of those poor souls who really want to learn—they are many and earnest, and not

<sup>1</sup> Adler, Mortimer, *Problems for Thomists, The Problem of Species*, (New York: Sheed and Ward, 1940) \$2.50.



all are in Catholic universities—for us to make clear that Dr. Adler, who has been tolerated these many years because of his undoubted talent and his apparent eagerness to learn, has never once given evidence of competence as a metaphysician, that he is not to be taken as representative at all of modern, living, well-informed well-trained Thomists. Further, it is no lack of charity to refuse to engage in controversy with Professor Adler, for we should not be refusing him knowledge, but only refusing to give it to him in the way he insists on taking it. These problems raised here are really settled; there are answers in St. Thomas, given only after centuries of investigation hypothesis and correction which are not irrelevant to the final answer; Dr. Adler may well say that “better readers than I may be able to correct me” (p.5); but every time that his own lack of training happens to raise a difficulty, the rest of us cannot stop the constant work of instruction to write a book, which he then will purge.

#### *Dr. Adler's Aim*

One can best understand the curious mixture which is *The Problem of Species* if he looks to the end of the book. It professes to be concerned with problems in the philosophy of nature, in which Professor Adler would have us understand the vast amount of empirical data gathered by the sciences in the past four centuries is to be interpreted in general terms and somehow under the light of metaphysical principles. Now that which appears as a constant from all the evidence is a sort of large evolution, a certain indeterminism among things which have their being in matter, evidenced by a vast proliferation of natural types and large-scale interchangeability. This much is true. After a superficial consideration of the alternatives of there being only a few ultimate natural, ontological species and of there being very many, he fixes rather on the former as furnishing him with an answer; because in his statement of antecedent principles he has committed himself to the position that “The species of composite substance is its substantial form” (p.20) and that this form is substance—“Species are discrete and integral forms, not subject to the qualification of more or less, and not related inter se as contraries are in a common genus” (pp.21-22). These last characteristics of substance, misapplied to the problem at hand, lead him to think that every species has a sort of absolute determination in being, such that it enjoys an absolute fixity therein and is sharply distinguished from any other species. From this point of view it is not possible to allow of there being many species of things; rather the number must be strictly limited, or species will put a restriction on the flux and indeterminism of the manifold of material things.

For many years we have heard the same sort of thing taught for a different purpose. Dr. Adler wants there to be only a handful of species (four or five) in order to allow for indeterminism and evolution, to allow the empiriological sciences full scope in their description of the world. The other men have taught the doctrine of there being only four species or so, because even more

clearly than Professor Adler they realized that whatever evidences the sciences of biology and chemistry and physics might offer, those evidences would ultimately be reduced to being of no significance. And for my part, I doubt if there is much to choose between the two positions. But the fact of that diversity of end served by the same doctrine of species perhaps is indication enough that both parties have not made the honest philosophical approach to their problem.

#### *Formulation of the Problem*

After a careful reading of the present work it becomes clear that the “problem” of species, as he would have it understood for the Philosophy of Nature, comes to this: “what are species?” (not, “what sort of is species?”, but rather, “what can I put my finger on and call it species?”) and “how many are there?” I should not at all allow that this is the chief problem, even for the Philosophy of Nature; it may not even be a problem in the sense in which M. Maritain has distinguished problem and mystery (in *Sept Leçons sur l'Être*, a book which Dr. Adler has read and from which he took his present employment of the word).

Not only in this book, but in *What Man Has Made of Man* and elsewhere, Professor Adler has taken Maritain's description of the empiriological character of the present-day physics, chemistry and the rest (a perfectly accurate description, we must add) and has conceived the Philosophy of Nature as a sort of universalizing science working upon those data at their own level, where the principles of metaphysics employed may shift to fit the evidence, though usually they cast the evidence to their own iron mould. But there can appear no sciences in the proper aristotelian sense of the word in the order of nature. (This last is a horrid supposition, and one from which M. Maritain is quite free.)

But because sciences are concerned with essences or natures, it would seem, and because he has only four or five species of things existing in matter, any account of scientific knowledge which allows of there being many sciences is wrong. There are some vicious pages in the last part of the book on this matter.

Now the novice who has devoted as much labor to studying as Dr. Adler has to writing about the character of scientific knowledge knows this much: the particular sciences, since they are specified by essence, deal with principles that are univocally valid for a given order of things; but no science may extend itself beyond its proper subject-matter; if such a science, then, come to bear to another the relation of subalternant to subalternate, its principles must undergo examination in this new matter in which concretion has taken place. But metaphysics, whose object is analogous and common, has principles which in the first instance are engaged with the greatest possible diversity that may be alleged; thus even in their contraction, when the principles of metaphysics are regulative of those subalternate sciences the Philosophy of Nature and the Philosophy of Mathematics, those prin-



ciples are as valid and as inescapable as in their universal formulation.

### *Logical and Ontological Species*

Now there are two presuppositions in this book: that logical species are not ontological species (he misuses the text of *Summa Theologica* I. 88. 2 ad 4 to bear out this point—it is the famous distinction between natural and logical species; he does not use the text of the same work I. 66. 2 ad 2, although it exists in translation; and of course he does not use in *Phys.* 7. 8, ed. Leonina no.8); and that ontological species are the same as the species with which biologists and other natural scientists are concerned (no documentation is offered for this—perhaps he was not aware of there being any problem).

The reason for the first presupposition is not difficult to uncover; the logical genus is of such indetermination that it needs the determination of differentiae to be the species; no such genus can be an ultimate species. Professor Adler does not see his way clear to accepting this and to holding his own doctrine of four or five species, and so denies the identity of ontological and logical species; and he bolsters this by the curious device of referring to the *entia rationis*, which are the object of logic, as against the *entia naturae*. But it is only by a thoroughgoing misconception of the *ens rationis* that that distinction could be made to serve the present discussion. The logician studies the *ens rationis* from the point of view of its modality, which is such that *rationis* does not put any contraction upon *ens*, in the way that substance, quantity, etc. do. Thus *ens rationis* is one of the two fundamental ways in which we speak of being *per se*; the whole of that being is caused by and is a function of the being which is divided by the ten genera, and the same problems of limitation occur therein, such not only that finite being in its intentional existence is composed of act and potency as principles of that order, but the composition of act and potency in the finite *ens rationis* stands as caused by the composition of the act and potency by which the finite existent stands in its own being. Thus M. Maritain is saying a primer truth of metaphysics when (pp.ix-x) he points out that species, originally a logical notion as a second intention, is identical with the same essence which the metaphysician considers. Aristotle put it thus: being is in as many ways as it is said; the modes of being and the modes of predication are the same. And those which are the initial diversity of finite being for the metaphysician, for the logician are the ultimate modes of predication: substance, and the other nine genera. Thus there is perfect identity of logical genera and species and ontological genera and species, so far as the nature which is indicated is concerned.

### *Root of the Multiplicity of Species*

But the logical genus indicates the nature under such indetermination that it is predicated univocally of its species. But (as the texts of the *De Ente et Essentia* and those cited above relevant to natural species make clear)

the form of the existing nature never exists under that indetermination under which it can be conceived, and the generic nature of man is not that of any other species of animal, so that animal as in nature does not hold itself univocally in respect to any two species; and that is by reason of the diverse *habitus* of potency to act in each case, as St. Thomas makes most clear. Thus every natural species and logical species is predicated univocally of its individuals; every logical genus is predicated univocally of its species; no genus, whether ontological or logical can exist under that indetermination which the generic nature involves; and no natural genus holds itself univocally toward its species—in fact, as the nature it signifies is successively more and more under the indetermination which is characteristic of the genus, the more diverse is the *habitus* of potency to its act. In the indetermination of that potency, therefore, and not in the indetermination of the genus, must be sought the root of that unfixity and multiplicity which Dr. Adler has observed in nature.

That potency, for things which exist in matter, is ultimately prime matter. There is a large number of species, and *animal*, *plant*, *body* (even subdivided into *element* and *mixture*) can never be ontological species, any more than they can be logical species. But to suppose that each specific nature has the same necessity in being as another is simply to show that one is not conversant with elementary metaphysics. The fact is that the more any form is an immersed form, the more does that potency and indetermination which is prime matter show forth in the way that thing stands in being; for the matter is not only a principle of multiplicability within the species (so that when designated it is the principle of individuation), but it is a principle of the species in its being. This is rather the hierarchy, then: as one approaches more and more the absolute indetermination of prime matter (this is a sort of calculus), the more numerous do species become, the less fixity do they exhibit in being, the less sharply is any species distinguished from that species proximate to it, the more likely is change to occur from species to species; a diversity in operation which is not a sign of diversity in species among different men by reason of the domination of the rational form over its matter, may well be a sign of a diversity in species among oysters. Professor Adler threw out logic, only to make the mistake of seeking as a root of indetermination the indeterminacy of the genus, when in fact what he should have looked for was the indeterminacy of prime matter.

### *Multiple Generic Principles*

But it is not really possible to avoid considering the nature of the genus itself. For the genus, which is *ex parte materiae*, in the order of intelligible being also is affected by prime matter as potency. For example, *animal* is the proximate genus to the species *man*; it is not necessary, and indeed it is most unlikely, that it be a proximate genus to any other species. In man it is only the eminence of the form which results in *rational's* determining *animal*



completely to the integrity of the specific nature. But as we approach prime matter as a term by the same sort of calculus as described above for species, the generic principles themselves become more multiple; the intermediate genera become more numerous, less sharply differentiated. The definition of oyster, when it will finally have been given, will be more complex than the definition of man.

### *Classification in the Natural Sciences*

Now the problems of the logician and the metaphysician are problems of predication and of being; they are not in the first instance problems of classification. But any attempted determination of the number of species and their definitions cannot be made in the Philosophy of Nature apart from the principles we have just mentioned.

There is a kind of classification worked at in various natural sciences, though, which is an interesting by-product of the activity of the logician, but in which genera and species need not correspond at all exactly to the genera and species of the metaphysician or logician. In the province of *logica utens*, even as every instrument exists by the being and character of the principal agent, the things of logic may actually change character as they are employed now by this, now by that particular science. Genera and species, as the prime concern of the metaphysician and of the man professing *logica docens*, are not classes or principles of classification. But in the development of the philosopher's study it becomes evident that classes do correspond to some genera and species, and bear relationships in extension to each other. The biologist or the physicist may stand in need of the technique of classification, wishing to describe class relationships in terms of greater and less extension, being concerned not with modes of being, but with principles of the sort he deals with; thus classes may be made according to the principles of the anatomist (vertebrate, invertebrate, etc.); they may be made in accordance with proportionate atomic weights (the periodic classification of the elements); but *vertebrate*, which thus might be as genus to *man*, in the logic which teaches the mode of knowledge is not genus but property; *having atomic weight of 1.008*, which might be differentia or even species for the physicist, in relation to *hydrogen* is property. And it is even possible that such "genera" and "species" among the sciences conflict with each other, in a way that the very same things belong to the same genus under one classification, which do not belong to the same genus under another. Professor Adler is altogether unaware of this dimension of the problem. And his indiscriminate employment of the texts about genus, etc. taken from the *Topics*, apart from any understanding of their function in the economy of that work, is hard to explain in a man who knows how to read a book; he is frying his steak in water.

(One part of this work escapes the competence of the present reviewer; I do not know whether his examples of classification into genera, species, phyla, etc., etc., such as the various natural sciences make will meet with the approval of the men in those sciences.)

### *The Number of the Sciences*

Dr. Adler himself introduced the question of the number of the sciences, even after his explicit refusal to admit anything of more than tangential importance in a study of intelligible being. I do not know whether he ever tried to understand the text "*scientiae secantur quemadmodum et res*"—if he did, he probably was unaware of the long historical development of the problem and of how the solution came to be given. But in a footnote in the *Degrees of Knowledge*, he probably did read a quotation from John of St. Thomas to the effect that in the perfect state of developed human knowledge there would be a science to correspond with each essence. It surely is part of the same metaphysics he has espoused to deny that there are many sciences; but I really doubt whether he has seen the reasons why he had to say that there are not many sciences.

The fact is, that sciences distinguished not by part-whole relation or by degrees of total abstraction, but established as corresponding to orders of intelligibility in being by formal abstraction, are regulated by the same sort of influence of matter-potency as species of things themselves are. Thus metaphysics is altogether one science, and does not suffer division into parts. (All natural human knowledge suffers division into the speculative and practical at least. Revealed theology, which is as a certain ray of the knowledge which God has of himself, altogether one, does not suffer division even into the speculative and the practical.) From the outset mathematics is not one science, but is a few. From the outset, the order of nature is many sciences, these sciences becoming more numerous accordingly as the "forms" of cognition are more and more concreted in matter.

### *Professor Adler's Position*

In regard of his original problems, then, Professor Adler has not put them well, nor has he taken the appropriate means to discovering their answer. It is quite possible that any scientist, a chemist, a biologist, after having considered things from the point of view of the proper accidents, and having erected schemata of "genera", "species", and the like, may come upon enough evidence to be able to express the essence itself. We do not think that it will happen; but should a scientist do so he will then be able to make demonstration based on all the modes of being said *per se*; at present the scientist usually employs only certain of those modes (Dr. Adler will allow him none). On the other hand, the metaphysician can offer a general explanation of what it is to be in matter, such that the general pattern of things arranged hierarchically in species in their being, arranged hierarchically in genera and species in each thing's intelligible being, will be made manifest. Between these two men it is possible that the way of definition may be pursued. But from neither point of view is Professor Adler a qualified person to do that work.



When we first read these articles we were extremely disedified at the lack of any knowledge of what the problems of metaphysics are, or of certain classic mistakes which find themselves repeated here. Dr. Adler would have to study the history of philosophy to realize the sort of position he has actually taken when he identifies species with the substantial form, and other things of the same sort. Boethius, Avicenna, Gilbert of Porrée, St. Albert, Henry of Ghent—these men are giants. But on subsequent readings it really becomes clear that these men, concerned with the problems of being and of predication, have little to do with Professor Adler. A man whose information is not equal to the task to which he has set

his hand, he has chosen at random such metaphysical principles as seem to be useful, in the most trivial sense of that word, to interpret a short collection of evidence taken from the natural sciences; and these principles appear to be such as bear no profound relevance even to the work in hand. And so we shall make no further reference to the fascinating history of the principles themselves. Dr. Adler has demonstrated only this, that he has no right to a license to practice as a metaphysician. Until he will have forsaken telling people how to read and will have learned how to learn, it will be doing no one a service to take him seriously or to review his books.

## Jesuit Philosophers, 1540-1940

### Editorial

Dr. Gerald B. Phelan, speaking at the Quadricentennial Symposium of Jesuit Scholarship held last week at Saint Louis University, made a statement which brought a spontaneous burst of applause from his audience. Never before, he said in effect, has the philosophy of St. Thomas been so well understood and widely appreciated as today.

This is an astonishing thing to say of a man who lived seven centuries ago, but as Father Phelan went on to show it is no over-statement. The centuries immediately following the death of the Angelic Doctor show a rapid deterioration of Christian philosophy until by the middle of the Sixteenth century it had become an object of scorn even in the universities. The work of St. Thomas was almost forgotten, and what remained had been so distorted that it could be considered a minor discipline in the hierarchy of Renaissance learning which had as its single goal the *eloquentia* of Cicero. There were exceptions of course, but on the whole this was the dismal situation which faced the Society of Jesus when, a few years after its foundation, the apostolate of education gradually took shape as a major means to achieve the greater glory of God.

### *Early Jesuit Philosophers*

It is significant of the spirit of St. Ignatius and the first leaders of the Society that they placed philosophy in the first rank of studies and gave St. Thomas to their philosophers as the safe norm by which speculation and instruction in philosophy and theology were to be guided. This was to be no slavish authoritarianism, but simply a recognition of the great work of the Angelic Doctor, and the conviction that his was the safe way to the acquisition of Wisdom. The condition of learning described above shows how important this decision was for the future of philosophy.

In spite of the prevalent misunderstanding which made of philosophy a practice in subtle dialectic as a preparation for elegance of style, and the even more serious obstacle of the Protestant Reformation which demanded that Catholic scholars devote their efforts to apologetical defense of the Church against heresy, the Society of Jesus led a movement to restore the integrity of philosophy, and produced

some speculative scholars of the first rank. Among the more noteworthy were Suarez, Molina, Bellarmine, and later, Sylvester Maurus. And it must be remembered that these men were primarily theologians and teachers, defending the Church at times which were scarcely conducive to the pursuit of Wisdom for its own sake.

### *Contemporary Jesuit Philosophers*

But the glory of Jesuit philosophers is not confined to the first centuries of the Society's life. Each subsequent age has produced philosophers and teachers of great talent, and our own is no exception. The last twenty years has seen the development of a major advance in Christian philosophy, and in it Jesuits are playing an important part. In Europe the Gregorian University has been a center of philosophical scholarship with such outstanding faculty members as Boyer, Hoenen, Arnou, Renard, and many others. The school at Louvain with Maréchal and Brisbois; that at Jersey with Descoqs, André Bremond, and LeBlond; the German editors of *Stimmen der Zeit*, Przywara and Jansen; these are only a few of the Jesuits playing major rôles in the resurgence of Scholastic philosophy.

And in America, where now will fall the major responsibility for continuing the work, since war has disrupted the communication of ideas in Europe, the Society of Jesus is prepared to contribute to the movement. This it is doing both by producing teachers and scholars within its own ranks, and by encouraging promising students in its universities to undertake higher studies in philosophy. A notable example of this latter has been the work of the School of Philosophy at Marquette University where an extraordinary interest in Christian philosophy has produced solid results in scholars and scholarship.

The future for the study of philosophy in America is bright and the Society of Jesus will continue its four hundred year old tradition in helping the advance. Side by side with scholars of the other Orders, with the Institute of Medieval Studies at Toronto, and with the ever increasing group of profound philosophers among the laity, Jesuit philosophers look forward during the coming years to even greater achievements in the love and pursuit of Wisdom.



# Anatomy of Analogy

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SCIENCE divides to conquer. It progresses by partitioning the universe. Grouping similar things, it describes their properties by theories and laws; and when new differences are brought to light, the groups are divided, only to be subdivided later. The procedure is legitimate for science, and most efficient. Science is lavishing useful conclusions upon mankind. But the world which science presents is a multiple and departmented thing, and unfortunately the very method of science has distracted too many from the highest of sciences, in which alone the universe is unified. This highest science is wisdom; and to possess it, one cannot stop with sheer science.

Wisdom orders all things into unity, for it knows them as they are. Indeed things are not one, they are many; yet by the very fact that things exist they have something in common, they are *one* in a way. They are similar in *being*, and in *being* they differ, that is, they are *analogous* in being. It is true that science often takes advantage of the analogies between beings as when, for example, it learns of one animal through the analogies of this one with a better known type. But the resemblances, the unities, with which science usually deals are *perfect* similarities. Wisdom, on the contrary, orders all things by attending to their *imperfect* similarities, to analogies in their perfections.

The purpose of this discussion is to explain or describe analogy for the student<sup>1</sup> rather than to "prove" it to the adversary or probe it deeply for the professional philosopher. Let us begin, therefore, with a few instances of analogy. Being a parrot is not being an oyster, and yet to be either of these is *to be*; the student would perhaps waive all relationship with the amoeba, and yet he resembles it in existing. Existence for the parrot, oyster, student, and amoeba is analogous. When we affirm of

every one of the four that it *is*, the act of being which is predicated is partly the same, partly different. To choose an example of a different sort, we may say that there is an analogy between the moon's rule of the night and the sun's dominion of the day. Or there are analogies such as that between the safety of a building as conditioned by its solid foundation and the happy outcome of some project as depending upon prudent planning. Lastly, as an example of the "use" of analogy, when we reason that the sculptor of the Apollo Belvedere had exquisite creative imagination, we proceed by the analogy which a cause and its effect must have.

## Orientation

The position of analogy is conveniently indicated with reference to predication. Analogous, univocal, equivocal—these are three sorts of predication. *Univocal* predication attributes<sup>2</sup> to two or more things some perfection in which the things are exactly alike. At the other extreme, *equivocal* predication sometimes attributes a perfection to one of the terms, but not to the other. *Analogical* predication holds a middle position between these two, attributing the perfection to the two or more (analogates), but in different manners. The analogates are *not* univocally similar, but they do have a definite resemblance to each other.

For example, *life* is an analogous perfection. An oak, an oyster, an elephant, each *live*. Yet life for the vegetable is simply not life for the elephant. Each lives; hence they are alike, yet in that very life which each has, they differ. The tree shares in the perfection of life according to tree-essence, the brute shares in (participates) life to a different degree—according to elephant-essence. The transcendental perfection, life,<sup>3</sup> then, is predicated *analogously* of tree and of elephant.

Two obvious facts concerning the analogy we are discussing may be noted immediately. They will be considered in detail later. First, this analogous predication expresses the fact that the perfection concerned is *actually found in the analogates*. In this, analogy differs from metaphor, for in metaphor, the perfection of which there

<sup>1</sup> In view of the merely expository purpose of this article, no corroborative text references are given. However, a few of the more important passages in St. Thomas are listed here, as well as some recent studies, which may assist the beginner and the more advanced student as well. The article by Fr. Van Leeuwen gives much the same development as that employed here, and much has been drawn from it.

De Ver. 2. 9c.; In IV Meta., 1. (Cathala #535); Sum. c. Gent. I. 32.; De Ver. 2. 11c.; 2. 3 ad 4; 2. 11 ad 4.; 1 Sent. d. 5. 2 ad 1.; De Malo VII. 1 ad 1.; S.T. I-II. 61. 1 ad 1.; S.T. I. 12. 1 ad 4.; De Ver. 23. 7 ad 7.

Antoine Van Leeuwen, "L'analogie de l'être," *Revue Néoscholastique*, XXXIX (1936).

Louis DeRaeymaeker, "La structure de l'être fini," *Revue Néoscholastique*, XXXIV (1932). 187-217.

Ferdinand Van Steenberghen, "La composition constitutive de l'être fini," *Revue Néoscholastique*, XLI (1938). 489-518.

Andre Marc, S.J., "L'idée de l'être," *Archives de Philosophie*, X (1933) Cah. I. Paris.

<sup>2</sup> In none of what follows is "attribute" to be taken to mean predication of perfections not formally intrinsic in the subject of the attribution. When a perfection is formally predicated of a subject, the latter either *has* the perfection (as man has life) or *is* the perfection (as subsistent life is life). (And life is not attributable in this way to a material cause of life, such as food, or to a manifestation of life, such as the motion of the heart.)

<sup>3</sup> Life is a perfection which *transcends* the various grades of life; hence it is transcendental. Of itself it is proper to, limited to, no "degree". Life without limitation, subsistent life, is the perfection which is participated by all that have life.



is question is not formally in both the analogates.<sup>4</sup> There is no true analogy here at all. Thus when the meadow is said to be a "smiling" meadow, the perfection of smiling is not really in the meadow at all. But contrariwise, an analogous perfection is really in the analogates; it is properly attributable—and this distinguishes analogy from equivocation.

In the second place it is to be emphasized that the agreement of the analogates is not perfect, not univocal. Univocal agreement is that which is had by things of a common nature, things sharing in transcendental perfections in the same degree. The tree and the elephant really *differ* in the perfection of life; they share it in diverse degrees. Life is, in them, analogous—not *univocal*.

Analogous similarity is differing similarity, and the difference cannot be perfectly prescinded from the similitude. But to describe analogy in this fashion is little more than pointing out the fact. "Analogy" must not be left a mere label for this very definite but, perhaps, not so clearly understood situation. What follows, (Section I) will discuss analogy itself as it is in finite beings. Then, by way of synthesis, a more adequate view of analogy—the cause of analogy—will be presented (Section II). Lastly, the analogy of creatures and the Creator will be outlined (Section III).

### I. ANALOGY IN ITSELF

Analogy is but another word for proportion. Something of proportion will be understood from mathematics; hence let us begin there. A simple proportion is, for example, the relation between six and four, or between six and five. And besides simple proportions, there may also be proportions between proportions. There may be the proportion of equality, for example, between these simple proportions 2:1 and 6:3. There is likewise sameness of proportion in 3:4, 7:8, and 12:13. Or in geometry, the line has the same proportion to the plane as the plane has to the three dimensional figure.

What the arithmetician calls ratio is that in which the following three proportions are equal: 2:1, 6:3, 100:50. Now, to use the term immediately, arithmetical ratio is one sort of *proportionality*. Proportionality is that which constitutes each proportion the proportion which it is. 6:3 is a proportion which is equal to another proportion, 2:1 because these two have the same proportionality, viz. "to be double." This is an instance of *identity* or *univocity* of proportionality (rather than analogy of proportionality) but it has the plan, the "pattern" of analogy in beings, as we shall see presently.

<sup>4</sup> To say that analogates in the analogy of proportionality really have the analogous perfection in some way, distinguishes this analogy from the analogy of extrinsic attribution, or mere metaphor. To say that each of two analogates either has the perfection formally or is the perfection, distinguishes the analogy of which we are speaking from that of intrinsic attribution, in which one analogate, not possessing the perfection formally, is, for example, only a cause or a sign of the perfection in the other analogate. (See note 2, above.) In the analogy of proportionality, the perfection is *formally* as well as *intrinsically* in all the analogates.

### "Distance" between Analogates

Mathematical proportionality can be identical even when the terms of the two proportions are separated by indefinitely great numerical distances. The proportionality in 2:1 is verified no more accurately in 6:3 than in 100:50. Agreement in proportionality, then, is a kind of relation which can span indefinitely great disparity. In this respect, mathematical analogy is very much like analogy in beings.

One of the most fundamental characteristics of analogies of beings is that the analogates are separated by "*metaphysical* distances." Analogy achieves a community, a kind of "bridging" between these diverse beings. Intellect for example, utterly transcends canine sense, yet there is an analogy between them. Or, to take the capital instance, analogy brings together the finite and the Infinite.

Analogies of beings differ in several respects from mathematical similarities of proportionality. By discussing these differences we shall learn more of the structure of analogy. We shall consider: (1) that in the analogy of beings the agreement of proportionality is only imperfect; (2) that in true analogy there is but imperfect similarity between the analogates, no simple proportion; and (3) that analogates are of differing degrees of perfections or even of diverse categories of being.

#### 1. Imperfect Agreement

That in which analogues have their community is proportionality. But in analogous beings the agreement in proportionality is not perfect; the proportionalities are not, as in arithmetic, identical. To understand this point, let us take the following cases of agreement in proportionality:

2:4 ----- equals ---- 4:16

2:1 ----- equals ---- 100:50

line : plane ----- exactly as - plane : tridimensional figure  
vision : eye ----- somewhat as - understanding : intellect

Now in each of these cases except the last, it is quite correct to affirm *identity* of proportionality. But vision is not *in* the organ of sight in exactly the manner understanding is *in* the intellect. The two proportionalities ("being in") are surely similar, but only imperfectly so. There is, therefore, not identity (univocity) but *analogy* of proportionality.

It is true that any similarity implies some distinction between the things which are similar: each is not the other. Yet in the perfection in which their similarity is founded, they are *exactly the same*, if the similarity is perfect. Thus Plato and Socrates are exactly alike in being human (their forms are essentially the same), and their differences (being two individuals, having differing accidents, etc.) do not affect their perfect similarity in essential perfection. Whatever differences they have are, so to speak, outside their sameness. Accordingly, the mind can represent that in which they agree (human form) perfectly without representing the differences—and



this concept is "applicable" to each of them and to all having the identical nature.

However, in analogous beings, besides differences which are "outside" the sameness, there is a difference within the sameness. The act of seeing may be in one individual, and the act of understanding may be in another. Seeing would thus differ from understanding by having a different subject. But in addition to this diversity there is a difference in the very proportionality in which vision resembles understanding. *Being* in the physiological apparatus of sight is necessary for the act of seeing, but that very *being in* makes seeing differ from understanding. To be *in* the intellect, means precisely being a spiritual, a non-material act. And, what follows this condition of beings, if one tries to prescind *being in* the organ of vision from that which makes it different from *being in* intellect, it is no longer the same *being in*. This is what is meant when it is said that the similarity is differing similarity.

## 2. Analogates are not Proportionate

Proportion is either simple proportion (e.g. 2:1) or proportion (analogy) of proportionality (e.g. 2:1::100:50). Simple proportions are such as that between the size of the Empire State Building and that of a match, or that between the intensities of two lights. And, since proportions are not quantitative alone, there is a proportion between the wisdom of Chesterton and that of Caesar, or between excellences in two characters. Now, things which are alike in essence have simple proportion between them, not analogy, in their essential perfections. The simple proportion is equality in their degree of sharing in the transcendental perfections. Simple proportion, as it were, establishes a "short cut"; it is a more "direct" relation than analogy. Arithmetic can supply a clear instance: In 2:1::6:3, 2 does not have need for the equality of proportionalities in order to be brought into some community with 6; for 2 has a simple proportion to 6. Again, in the distance between 2 and 100, the proportionality is in a way superfluous. The terms are actually proportionate.

On the contrary, the analogy of proportionality denies the simple proportion between the analogates. Understanding, for example, utterly transcends, and by that very fact is *not proportioned* to ocular vision. This denial of proportion will be more clear when we say that diversity of degree of perfection or diversity of category is required in the analogates. Let us proceed to these immediately.

## 3. Analogates Differ in Grade

Mathematical proportions bridge indefinitely great distances by the equality of proportionality; (in 2:1::1000:500, the analogates, 2 and 1000, are actually proportionate). Similarly, perfect essential similitude relates beings of univocal essence (Plato and Socrates); and such beings are actually proportionate in their perfections (they have identity of proportionality). But to span the metaphysical distance between extremes which are of diverse grades and therefore not metaphysically proportionate

(for their participation in perfection is not univocal), metaphysical analogy, the analogy of proportionality is required. Likewise it is analogy which "relates" beings of diverse categories, which, of course, have no generic community, such as substance and accident.

Two beings of any category must differ in their essential grades to be metaphysically<sup>5</sup> analogous. As they would approach being actually proportionate, themselves, by that much the limit would be approached at which the *analogy* of proportionality vanishes into identity of proportionality. This is true because of the very constitution of the metaphysical grades. There is in every finite being a limiting principle, the essence,<sup>6</sup> by which that thing is of its own particular degree of perfection rather than of any other. This principle limits the *esse* in fitting proportion to the particular limited grade and every being which has this same definite proportion of essence and *esse*, is of the same metaphysical grade. The equality of proportion in all these univocal things is also expressed as the *identity* of the proportionality by which the respective proportions in the things are determined. Thus it is that when two things are of the same metaphysical grade, they do not have analogy, but identity of proportionality.

Although it can be but brief, express mention should be made of the compositions in beings. This will further clarify what has just been said. Being and perfection cannot divide themselves into many or limit themselves in various degrees unless there be in each of the many a principle of diversity and limitation. Many beings are in

<sup>5</sup> There may be ambiguity in the use of the word *metaphysical*. The analogy we are discussing is metaphysical; it is a relation between the *perfections* of beings. There is also physical analogy: the analogy between *individual beings* themselves. Since one being is definitely not any other, any two beings (even of a single species) are physically analogous. But not all analogates in physical analogy are also metaphysically analogous. Metaphysically, that is, in their grade of participation of perfection, beings of one species are univocal.

It is, of course, a confusion to understand metaphysical to mean logical (existing only in our minds). To make this clear: participation of truth and goodness in the human degree is analogous to participation of these perfections in the canine degree even though no human being were aware of the fact, and it would remain true even though no creatures at all existed. So much is the metaphysical order independent of the logical that finite beings actually depend upon the metaphysical order, and minds are conformed to the metaphysical order by being conformed to physical, finite things.

<sup>6</sup> Essence, perfection, genus—these must not be confused. A transcendental perfection (life, or goodness) is variously participated by various things. But a given essence cannot be variously diminished or augmented in perfection. It is by its essence that a thing is limited precisely to the degree of perfection which is proper of that thing. If one essence differs at all from another as to kind or degree of essential perfection, the two are of different grades. Brute essence with rationality "added" to it is not brute essence at all.

Genus is set off from essence at once in that essence is a physical principle of an existing thing, whereas a genus (or a species) is a reflex universal, an affair of thought, a logical entity, although it is founded upon the reality of beings. In the logical order, the genus is potential to further determination (by "contracting" specific difference). It is, in a manner, integral or intact in its subordinate species. The species, *man*, has animality in univocal community with the species, *brute* (if this be species). Yet the human essence participates perfections in only analogously the same manner as does the brute essence; and there is simply no essence that corresponds to the indeterminate genus, *animal*—for whatever exists, exists determinately.



fact possible (in addition to Being itself) because Being may be participated by the being of various individuals in which it is limited. Thus a being may exist in every possible degree of perfection. It is in this sense that we say that composition of essence and esse permits the multiplication of being. There may be as many beings as there may be differing essences.

Since in some grades of participation of perfection, the essence itself may be multiplied in many, each of which has the same degree of participation in perfection, at these levels, many beings of one kind are possible. This composition which permits the multiplication of beings of one degree is the matter-form composition.

The composition of existential principles, essence and esse, allows the plurality of analogously similar beings. The composition of matter and form allows also the multiplication of perfectly similar beings. If the differentiating principle in composite essences were wanting, the similarity of these essences would become numerical identity, which is not similarity. (Physical analogy—proportion—would become physical identity.) Similarly, as essence would cease to differentiate beings as to metaphysical level, the analogy of beings would approach univocal similarity. (Metaphysical *analogy* would become metaphysical identity.)

#### *Analogates of Diverse Categories*

The relation of simple proportion is also denied if the analogues are of different categories. There is utterly no direct proportion between *any* substance and any quality, quantity, relation, etc., (even in the same being) nor is there such a proportion between the categories of accidents themselves. Yet, the proportionality by which there is a proportion between any accident and its act of accident-being imperfectly resembles the proportionality by which there is a proportion between any other accident and its act—as well as proportionality in the case of any substance. Therefore each of these has a true analogy with each of the others.

Lastly, it is to be noted, that two beings may be, not only of different categories, but at the same time they may be of different metaphysical grades—for example the angel just below the Archangel Raphael and the *joi de vivre* of a skylark. Simple proportion is doubly negated here! The extreme divergence, of course, is seen when any categorical being is “compared” with Being, which transcends categories as well as grades of perfections. Yet there is analogy even here. In fact this analogy is the dynamic “relation” by which categorical beings have their being and are constituted analogous.

If the consideration of analogy to this point has been obscure, the reason may be that analogical beings in general are not wholly intelligible in themselves. They are somewhat understandable, but as reason moves toward understanding, it seeks the adequate reasons for things—and it must go beyond dependent beings for this. Pressing the question, then, how and why things are analogous, one comes to a cause for them, and for their analogous-

ness. Consideration of analogy from this viewpoint should deepen and integrate what has been said thus far.

#### II. THE CAUSE OF ANALOGY

The cause of analogy in beings is an analogous cause. It will be convenient to approach this cause by way of the *one*. Similarity in general is a kind of *one in many*. For things to be similar is to have a oneness. The explanation of this oneness, say, in several roses of identical variety, must ultimately be one, not many. Similarly, it would not adequately explain the similarity of all tigers to say that there were at one time fifty similar beasts of that kind. The question would remain: why do these have a oneness?

When a thing is produced through causation according to nature, as in the case of generation, the nature of the effect follows the nature of the cause. The rose bush does not give rise to butterflies. It has but its own form to educe in apt matter. And the *oneness* of form in the single cause or in a number of causes (bushes of a given variety) gives the immediate reason for the similarity of the products. In fact, this similarity of effects is unavoidable if the agent always causes effects which follow its own nature—the effects will be univocally alike.

Now, just as there is a oneness of cause for the univocally similar, there is a oneness of cause which explains the analogically similar. It is clear that this cause, explaining the oneness of analogous things, is not producing all of them in accordance with its own nature—for then all would be of one univocal nature. But how, then, is it producing them? A cause, in producing effects which are not of the identical nature of that cause, is operating, not according to nature, but according to *intellect*. A man need not himself be a table in order to make a table, he need not be a landscape in order to paint one in oils. The form according to which an intellectual being operates may be a form which he possesses in intellect. And since intellect itself can possess any form, if man has the requisite efficiency he can cause many things of various natures, other than his own. Hence it is possible for an intellectual being to produce effects which are of diverse grades of perfections. And since that intellect is *one* intellect, the similarities, perfect or imperfect, in the things produced will be explained.

When the reason of the oneness in two or more imperfectly similar beings is sought, we are led to an intellectual cause, for these beings are of diverse metaphysical degrees, and natural causes have of themselves univocal, not analogous, effects. The intellectual (i.e. analogous) cause can bring it about that effects exist which are of various grades of transcendental perfection. For this cause can have exemplar ideas which determine its efficient action (by which the effects exist) and thus determine the nature of the effects. If, then, the exemplars determine various participations in (proportions to) the transcendental perfections, the various proportions of things to a *one* are determined and their imperfect similarity is explained.



It is plain, too, that there may be analogy between two beings, not only when both depend upon a common cause, but also when one is the analogous cause of the other.<sup>7</sup> In either case the oneness of the analogues is explained through an analogous cause. Nor does the disparity of cause and effect exclude analogy between them. Although Michaelangelo's knowledge of Moses the man utterly transcends the accidental contour of a stone figure, yet the two may be analogous. The exemplar idea makes possible the Moses-like determination of the stone. Or, to go further, the most important of all analogies is that between the First Cause and its effects.

### III. THE GREAT ANALOGY

The most important of all analogies is that between creature and Creator. Suppose there is no analogy. Then, if God exists, since creatures are not God, they do not exist. Or, if creatures exist, since God is not a creature, God does not exist. Or, if creatures exist, and adequate reason is satisfied, then they are God. This does not "prove"<sup>8</sup> analogy, but it indicates its fundamental position.

The proportion of proportionality describes how God and creatures have a community, a being together (*simul*). The Cause "has" all its perfections without dependence, without limitation; it is its perfections. Thus, the proportionality of this analogue is "being identical with." Of course, there is not potency here, and no distinction between principles in the First Cause which would make a proportion possible; there is perfect identity, which—literally—transcends proportion. It is "proportion" without any imperfection (such as duality). The divine Essence and *Esse*, are so perfectly fitting, "proportioned"—words are inadequate here—as to be one. And this one is the archetype, the principle of all proportions in which they participate.

The finite analogue, on the other hand, has actual (limit-implying) proportion between its constitutive principles; and the proportionality of this proportion imitates the perfect proportionality which is identity. In this way is there "community" between Creator and creature.

The creature is like God in "having something to do with being"; this is to *subsist* in the one case, and to *exist* in the other. Likewise, through analogous imitation of the subsistent degree of any perfection, there may be many degrees of *having* this perfection. These degrees are the metaphysical grades, and this is the possibility of

creation. In analogously imitating the One who is perfection, beings (other than Being) are constituted in act. It is because a thing imitates *Being* that it has its *being* and the being of all its perfections.

### Summary

By way of summary, let us enumerate the chief points which have been discussed. This enumeration will serve to describe analogy, and such a description has been the primary purpose of these considerations.

Analogy is, then, a "relation" between two or more things which differ in the very perfection in which they agree. In other words, they are not of a univocal nature (in that case they would be actually similar and the difference between them would be outside the perfection in which they agree). On the contrary, they are of diverse metaphysical grades, having no simple proportion between them. More positively, that in which they are both alike and different is proportionality. The proportionality in one analogate by which there is proportion between its essence and its perfections, is actually like the corresponding proportionality in the other. This is the analogy of proportionality.

This analogy exists either because the two analogates are both dependently constituted participators of transcendental perfections in diverse degrees through their respective proportionalities; or it is because one of the analogates is the perfection and the others participate in it. In either case, the participation is possible through analogous causality and the exemplar-ideas which are in the intellectual cause.

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It is because things really are analogous that the universe presents itself, a unity, attractive to intellect, and penetrable by knowledge which excels science. It is because things are analogous that mind can course up and down the grades (the "steps") of perfections—where univocal unities would be futile—can freely range transversely from category to category. By analogies man can go from himself, the being he knows best, far down to the truth, the goodness, the beauty of all inferior creation, which is ordered to him; he can rise to know something of what it means to be a creature without matter. Finally, since beings are analogous to Being, from the existence and perfections of finite things, man can have knowledge of the transcending excellences, the very subsistence of God.

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<sup>7</sup> Some limit analogy to mean the relation of an effect to its analogous cause alone. They place the essential requirement for analogy in this, that the analogous perfection be in the primary analogate as in the cause that depends upon no other for its perfection, and that it be in the secondary analogate as in the one having the perfection only dependently. Material causality is also included in this approach, for accident is considered a secondary analogate with respect to substance.

However, analogy, since it denies simple proportion between the

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analogues, would in no way "compromise" the prime analogate if it be admitted that two beings, both dependent and the one not the cause of the other, may also be analogous.

<sup>8</sup> Analogy is known and established from finite beings. Since in finites, we can know being as being (rather than as only finite), and since analogy is known to go hand-in-hand with being, wherever being is given, analogy with other beings will be found. And in fact, if analogy were not thus first established as certain, reason could not proceed to know the existence of God.



# Book Reviews

## SCIENCE AND WISDOM

Jacques Maritain

Translated from the French by Bernard Wall

Charles Scribner's Sons, New York, 1940, pp. x + 241, \$3.00

With his usual insight and brilliance, M. Jacques Maritain has given us in this book his definitive views on the relations between theology and philosophy and between philosophy and science. A rapid historical survey shows that wherever these three forms of knowledge have not been kept distinct, their confusion has worked to the detriment of knowledge. On the other hand, whenever philosophy has been separated from theology, as by Descartes, or philosophy from science, as by Kant, the lower form of knowledge has triumphed at the expense of the higher. There is need, therefore, for a hierarchy of the forms of knowledge, a synthesis that will permit their dynamic cooperation.

The distinction between the philosophy of nature and the special sciences is found in the "mode of conceptualization" proper to each. As a background for this distinction we have the three degrees of "abstraction or visualization"; the discussion here is not so long or detailed as the similar one in *The Degrees of Knowledge*, but it has gained in precision and clarity of expression (pp. 38-39). The two disciplines complement each other, in such a way that they are both necessary for our knowledge of the material world (pp. 50-69, 116, note).

But the main object of this work is the relation between philosophy and theology, as M. Maritain himself would seem to indicate in the introduction, where the relation of science and philosophy receives a scant mention (p. viii). For this purpose, M. Maritain distinguishes first between speculative and practical (moral) philosophy. Speculative philosophy is specifically distinct from theology, because it has its own object and its own principles. But it depends on theology in the order of exercise. First of all, there is an objective contribution, in that theology proposes problems and solutions to philosophy which the latter is perfectly competent to handle of itself, but which it would not have adverted to of itself. Secondly, there is the "subjective reinforcement" (pp. 81, 86-89), which concerns itself primarily with the influence of one form of knowledge upon another in the same person. We might put it this way: an object, once known in the light of theology, can thereafter be seen better when natural reason turns to that same object with its own principles. That this does not constitute philosophy a mere apologetic is obvious since philosophy has its own instrument: reason, its own object: being in its intelligibility, and its own principles: being and the immediate judgments flowing from being.

The rationalism which would separate philosophy and theology to the detriment of both is, thank God, now practically gone, but there is a new danger in the attitude of those who would deny to speculative philosophy its ability to reach certain conclusions without the aid of theology. The lower wisdom aspires to the higher, not because it is incompetent to attain its own object, but because it knows it well (pp. 24, 84, 90, 93). It is only because philosophical wisdom clearly and certainly reaches God as the Cause of being that it aspires to know God as He is in himself (pp. 24-25). The recognition of the reality of created things is not an adoration of them as Blondel would have it; a true knowledge of these created things leads us beyond them.

But practical philosophy has a greater dependence. Between it and theology in the order of exercise the same relation subsists as between speculative philosophy and theology. But ethics depends upon theology even in the order of specification. For all practical knowledge takes its principles from the ends to be attained in action. Hence a new end is a new principle, and necessarily modifies the whole reasoning. Now, theology, basing itself upon revelation, proposes to man a new, supernatural end. If moral philosophy were to disregard this new end, it would have to sacrifice its practicality

in becoming a science, or its scientific universality in becoming practical. In the state of fallen and redeemed nature in which man actually is, a purely philosophical morality would not be a practical guide to life, because it would not know the real last end of human existence. On the other hand, it could effectively prescribe certain individual good acts, but it could not show how the acting subject can live a life of consistent goodness, because it would be ignorant of the actual state of that subject (pp. 162-166). This is not to say that there can be no natural ethics in any sense; moral philosophy inadequately considered (p. 166), i. e., ignorant of the supernatural state of man, would really furnish some materials for a complete moral philosophy. But a purely natural complete ethics is impossible. For, after all, the object of ethics is human acts. But the human being who places those acts is not in a state of pure nature. Hence, the man who would construct a purely natural moral philosophy on the basis of these acts as if they were purely natural, would have a false morality (p. 167). The same thing will be true of the moral sciences, which, together with moral philosophy, make up the philosophy of culture. These sciences cannot help but imply judgments of value, and so must be based on moral philosophy for their principles.

To this series of dependence of moral science upon moral philosophy and of the latter upon theology M. Maritain applies the notion of "subalternation." Now, subalternation implies that the lower form of knowledge takes as its principles the conclusions of the higher. But it implies equally well the distinction between the two. This distinction, again, is rooted in the formal perspective each has of reality. Theology sees all in the light of revelation, moral philosophy, in the light of natural reason supplemented with some principles from theology.

We are all indebted to M. Jacques Maritain for his work in applying the principles of the distinction and ordering of the kinds of knowledge to our specifically modern situation. The disorder of the intellectual world today is primarily due to an ignorance of these principles. If the impending loss of our intellectual heritage is to be avoided, neither theologians nor philosophers nor scientists can afford to ignore this work, though some may disagree with it on matters of detail, such as the precise implications of the subalternation of ethics to theology.

The already over-long list of corrigenda needs to be supplemented with two items: on page 100 line 7 from the bottom, read "philosophicum" for "philosophicum"; page 118, line 9, delete the punctuation.

GEORGE P. KLUBERTANZ.

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## THE PROBLEM OF MATTER AND FORM IN THE *DE ENTE ET ESSENTIA* OF THOMAS AQUINAS

John Goheen

Harvard University Press, 1940, pp. 137, \$2.00

The theory of Matter and Form presented in the *De Ente et Essentia*, Mr. Goheen tells us, was intended to correct erroneous notions current in the Middle Ages among men in high places. If the attack was directed against Avicenna who had formulated his theory in the *Fons Vitae*, still it was not because he was the chief offender. Rather he was a buffer softening the blow about to fall on Augustine, Bonaventure, and others of the Augustinian tradition.

The first chapter of the book is devoted to a discussion of Avicenna's theory of universal matter, with just enough of Aquinas to show where the difference lay. According to Avicenna form is the principle of diversity and multiplicity, whereas matter is the principle of unity. Uninformed matter can exist, yet "Forma dat ei esse." Totally misconceiving the nature of matter as potency and as a principle of limitation, he demands a spiritual matter in angels and in the human soul. He likewise holds a plurality of souls. On anyone of these points he would have aroused the opposition of Aquinas.



It is in the second chapter, however, that the author reveals the ultimate object of St. Thomas' attack; a correction of current Augustinian views on matter and form. Had he, at the time, come out openly against St. Augustine, he would not have received a hearing. There is no doubt that the theory of universal matter is found in Augustine. For him the angelic forms were not pure forms but were received in a kind of spiritual matter. Uninformed matter too finds a place in his writings, mainly because he was attempting some sort of literal interpretation of the first words of Genesis: "In the beginning God created heaven and earth." This "heaven and earth" is for Augustine, uninformed matter of a double nature, from which were formed the heaven and earth we know. St. Bonaventure too is involved in this censure.

In the third chapter the author attempts to set forth the doctrine of St. Thomas on a knotty problem. For Thomas the spirituality of the soul is required by the nature of intellection. "We have seen that the very nature of intelligence excluded matter. It is only an active intelligible such as the human soul which can by intellection free forms from their relation with matter. Intellection is a relation of pure forms . . ." (pp. 81-2). It is gratifying to note that the author recognizes the fundamental difference between Aristotle and St. Thomas on this point, as also on the question of essence as a potency to existence.

It is too easy, in a review of this kind, unintentionally, to "damn with faint praise." In this case it would be particularly unjust. The author has no axe to grind. As a result he has presented a good, objective picture of the doctrine as he found it in the text of St. Thomas. For one who, presumably, has not been trained in the Scholastic tradition, his interpretation is remarkably good. It is unfortunate, however, that there are certain vaguenesses in the book. In such statements as the following, for instance, he leaves himself open to the reproach of grossly misinterpreting St. Thomas:

Further, it is the notion of quantity as such which Aristotle says is the very principle of individuation within corporeal substances. Aquinas follows Aristotle on this point and refers to the *Physics* in support of his position (pp. 13-14).

Again, in several places he indicates a misconception of the distinction between formal and efficient causality. In speaking of the relation of form to matter he says, "Second, since form is cause and cause is by nature act, form is act. (Implied in the above notion of the relation of form to the First Cause.)" (p. 23).

When a non-Scholastic discusses a question of this nature as fairly as Mr. Goheen has done, Scholastics should be greatly encouraged. The author is to be complimented on his clear and objective treatment of a difficult problem.

J. Q. LAUER.

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## A COMPANION TO THE SUMMA, VOL. III: THE FULLNESS OF LIFE

Walter Farrell, O. P.

Sheed and Ward, 1940, viii + 530, \$3.50

Father Farrell's third volume (the second, however, to be published) continues the splendid tradition established by his previous book, *The Pursuit of Happiness*, which corresponded to the Prima Secundae of St. Thomas' *Summa Theologica*. This volume, most happily entitled *The Fullness of Life* and devoted to the Secunda Secundae, completes what might be styled the "Moral" of St. Thomas, as distinct from his "Metaphysics" or "Dogma." Without exaggeration it can be said that, if the succeeding two volumes, the appearance of which the author promises at intervals of less than a year, maintain the same standard achieved by the first half of the work, then the author will certainly have made one of the outstanding contributions to present-day philosophical—and theological—literature.

The purpose of these volumes of making available the thought of St. Thomas for readers who are not professedly philosophers has thus far been eminently achieved. But Father Farrell has undoubtedly accomplished much more than that. In *The Fullness of Life* (as

well as formerly in *The Pursuit of Happiness*) with its solidity of doctrine, its wealth of apt illustration, and its captivating composition, the author has given to the professor of philosophy, to the preacher, to the retreat master, and to a host of others a mine of useful and inspirational material. The Secunda Secundae, as is well known, is almost exclusively the Angelic Doctor's exhaustive treatment of the theological and moral virtues. It is true that many of the virtues are not practiced, that they are frequently ignored or even ridiculed. But it is also true that by many people they are simply not understood.

A life of Christian virtue, built upon the foundations of faith and hope and charity, and lived according to the principles of prudence, justice, temperance, and fortitude, will necessarily have a wholesome unity, purpose, and completeness about it impossible in any of the ill-considered or unworthy substitutes which are to-day so prevalent. Father Farrell demonstrates this truth with brilliant conclusiveness. With cogent effect does he show, moreover, the rationality and pleasing naturalness of such a life,—its ordered fullness; and at the same time the abdication of reason and the perversion of nature inherent in every departure or deviation from the standard of virtue. And withal, such a life is endowed with a vigor and enthusiasm that is more than merely consoling, or, as it were, justifying its choice of action; it is positively exhilarating in the physical and mental, as well as in the moral sphere. Such realizations come home to one most forcibly at the conclusion of the chapters devoted to charity and to various of the moral virtues, so happily entitled: The Fullness of Love, The Fullness of Action (Prudence), The Fullness of Social Life (Justice), The Fullness of Religion and The Barrenness of Irreligion, The Fullness of Courage, etc. Finally, as should be expected, a life of Christian virtue is permeated with the joyous freedom of the children of God: freedom for the mind which comes with faith, freedom for the will that comes with hope, freedom for the body which comes with purity and the other parts of temperance.

The format of the book is excellent. Each chapter is preceded by an outline which gives an analysis of the chapter's content and of the thought of St. Thomas expressed in parallel questions of the *Summa*. Moreover, every chapter has the added advantage of forming a distinct unit in itself. A complete and detailed index concludes the book.

It can hardly be an overstatement to say that all who have read Father Farrell's first two volumes are eagerly awaiting the remaining two.

PATRICK J. HOLLORAN.

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## NATURE AND FUNCTIONS OF AUTHORITY

*The Aquinas Lecture, 1940*

Yves Simon

Marquette Univ. Press, Milwaukee, 1940, pp. 72, \$1.50

At a time when the always precarious balance between liberty and authority is in urgent need of stabilization, the Aristotelian Society of Marquette University chose the speaker and subject for the 1940 Aquinas Lecture with admirable felicity. M. Yves Simon was for many years instructor at the Catholic University of Lille, France, and is at present associate professor at Notre Dame University. In a comparatively short space (the printed lecture fills only forty eight pages exclusive of notes) Dr. Simon has developed his thesis on the essential function of authority with a completeness and lucidity for which most men would have required a book at least twice the size of this one.

In practice, says the author, the exercise of liberty and authority is based upon judgments of prudence, and thus will always depend to a certain extent upon particular circumstances. Such judgments of prudence in the use of authority are, however, governed by definite universal necessities, and these are the subject of the lecturer's inquiry. With admirable restraint M. Simon gives the reason why such a study is of primary importance. Men have come to identify the progress of society with the progress of liberty and the decay of authority—with consequences that are tragically evident.



The functions of authority are two; the substitutional, whereby authority is used to take care of the members of the community insofar as they are unable to take care of themselves, and the essential function, which alone can assure unity of communal action, even where members of the community are acting conscientiously for the common good. In this latter function, authority is the steadying principle of social action and will always be found necessary as long as men retain their individuality.

It is true, continues the lecturer, that prudential judgments have a practical, or subjective, truth of their own, independent of the theoretical assumptions implied in them, and although prudence demands a careful consideration of theoretical implications, no amount of study of them will produce theoretical certitude for any particular action. Hence the ultimate necessity for *authority*, a necessity which "is in no way accidental, . . . but a metaphysical consequence of the nature of things." (p.29) And therefore, "authority is the everlastingly good principle of the social unity in the pursuit of the common good." (p.30)

The last part of the lecture is concerned with the distinction between that authority which is the dominion of servitude, and that which is the dominion of freedom. One concludes after a careful reading of the lecture that M. Simon requires a great deal of his hearers in the matter of attention, but offers in return a convincing exposition of the nature of authority.

RICHARD H. GREEN.

## PHYSICS AND REALITY

Kurt Riezler

Yale University Press, New Haven, 1940, pp. 224, \$2.00

Here is "Aristotle" *redivivus*. Throughout the book Riezler impersonates the Stagirate lecturing to a group of modern physicists at Cambridge, England. And he most emphatically "lectures" them. He even appears to enjoy making them feel uncomfortable in the unsubstantial world they have created for themselves. "This embarrassment," he reminds them, "is the revenge of Substance for the treatment you have given it" (p. 20). Repeatedly he returns to this theme.

Your concepts. . . are accurate only in an empty world. Take Matter. Try to lay hands on it. It will vanish and pretend to be something you call Field. Track down Field. It turns out to be a kind of Space to the points of which you ascribe vectors standing for forces. Try to seize Space. It is vacant, waiting for fields to be engendered by Matter. Take force. You find Law, as a geometric quality of Space (p. 99).

It is clear that Riezler takes modern physicists to be just so many reduplications of Eddington. But if he erroneously rates his audience, he likewise seems to have summoned the wrong Shade to take the rôle of The Philosopher. This "Aristotle" lecturing to Cambridge dons in the 679 Olympiad (1940 A. D.) is a graduate physicist but hardly more than a sophomore in peripatetic lore. Thus he presumes to take St. Thomas to task for developing analogy beyond the point at which Aristotle left it (p. 111. Note 13, p. 120, refers to *Metaph.*, III Gamma, 1003b). This is because Riezler wants to hold that God is merely immanent in the world, and in no sense transcendent. But how this pretending "Aristotle" can identify Pure Actuality as an extant being with the mixture of potency and act which he concedes the world to be, is impossible to comprehend—unless indeed he hypostatizes the abstract notion, "being." This, however, is precisely what he berates the physicists for doing.

The value of the book is in its championship of substance, and in its calling the attention of physicists to Aristotle, for whom, alas, many of them have been indoctrinated with contempt. It is to be hoped that thus the quantitative abstractions of modern physics will be anchored to that secure and common ground of all concepts and theories, the concrete experience of the individual man. In this way the world of physics will not, like a runaway balloon, escape from reality. Nor, with a better understanding of Aristotle, will we be treated to a description of the individual substance of man as "density of being" (p. 61, *et passim*). Let us first have the genuine

Aristotle, and then enlarge on him, as St. Thomas and many more recent scholars have done.

J. A. McWILLIAMS.

## LOGICA FORMALIS

Joseph Fröbes, S. J.

Gregorian, Rome, 1940, pp. xvi + 407

The *Logica Formalis* of Fr. Fröbes is not just another textbook of Formal Logic. In fact it is better suited to the graduate student than to the beginner in the science. For the aim of the volume seems to be to evaluate and, if possible, incorporate into the traditional Aristotelian Logic the achievements and real advances of modern logicians. The author rightly supposes that the Logic of Aristotle, even in the form given it by the medieval Schoolmen, was not something fixed and unchangeable like the multiplication table, but something subject to correction and capable of expansion and completion. Furthermore, the author is convinced that modern logicians, beginning with such men as Bacon, Bolzano, and others, down to J. S. Mill, Jevons, Wundt, Husserl, Joyce, and, in mathematical Logic, Boole, Whitehead, and Russell, have made worthwhile contributions toward correcting, expanding, and completing Aristotelian Logic. The development of the natural sciences, in particular, gave rise to a corresponding development and technical refinement of inductive reasoning which the older Scholastics knew indeed in principle but failed to pursue in its manifold applications.

In his treatment of the subject the author proceeds along the lines of traditional Logic, but, keeping the aim of his undertaking constantly in mind, critically discusses, wherever occasion offers, both the ancient and modern views, citing the respective opinions not by verbatim quotations but by judicious summaries. Thus it becomes evident that an extensive, laborious, and thorough reading in the field of Logic has gone into the composition of this work. As a typical example attention may be called to the author's enquiry into the meaning of "essences" as understood by the ancients and moderns (pp. 24 ff.) and its consequent effect on Definition and Syllogistic Reasoning.

The Latin style appears rather labored at times and unfortunately many typographical errors have escaped the proof reader.

In harmony with the purpose of the book a complete author index is given, but the value of the book as a reference work would be enhanced if an alphabetical subject index had been added.

In brief, *Logica Formalis* represents a noteworthy contribution to the science of Logic and should find a place on the reference shelf of every philosophical library.

J. J. HORST.

## THE NATURE OF THE WORLD

W. T. Stace

Princeton University Press, 1940, pp. vi + 262, \$3.00

Once again in modern philosophy we see the recurrent demand of the human intellect for a metaphysics; philosophers have arrived at the stage where they see its necessity though their very philosophy itself denies its possibility. Metaphysics, the *bête noire* of the logical positivists and empiricists of the last century, has again dared to raise its head. In the words of Professor Gilson, "Philosophy always buries its undertakers," but it is a rare thing when the undertakers themselves unearth the corpse. Phenomenalism and Empiricism had their origin in the very denial of metaphysics. To tell a phenomenalist or an empiricist that he needed a metaphysics was nothing less than an insult. Yet that is exactly what Professor Stace is attempting to do. "Phenomenalism, so far, has no metaphysics. . . . Hence this attempt to found a phenomenalist metaphysics."

Anyone who has read the previous works of Professor Stace, especially his *Critical History of Greek Philosophy* and *The Concept of Morals*, will expect this new book to be a clear and concise treatment of the problem, together with a logical presentation of the author's solution. And he will not be disappointed. It is a pleasure to read a book by Professor Stace after one has been forced to decipher some of the obscure, inexact, and illogical presentations of philosophical thought which have appeared of late. Yet it is surprising to find



that one who appreciated so thoroughly the great philosophical systems of Aristotle, could be induced to adopt such thorough-going phenomenism, could even be led to attempt to revive the philosophy of Berkeley and of Hume.

In *The Nature of the World* Professor Stace has logically and consistently applied the fundamental principles of Empiricism to the analysis of reality. He does not hesitate to follow these principles to their ultimate conclusion. It is the philosophy of Berkeley without many of the inconsistencies of the original; the philosophy of Hume, but with more clarity and objectivity than Hume could command. The author is opposed to realism and to idealism; he does not see how he can transcend the empirical principle. He explains reality on the basis of cells—an analogy with Biology. Cells are the various units of consciousness. Nothing exists but cells, or consciousness and the data of consciousness. "Thus the theory of cells is not an idealistic metaphysics. If it is necessary to have a label, it may be called phenomenistic" (p. 40). "The theory of cells denies that there is a public object and holds that nothing exists except the data and the consciousness which together constitute the cell" (p. 53).

This is the most clear and thorough-going presentation of Empiricism I have read. Yet to the entire work I would be inclined to apply the judgment of Professor Gilson in his *Unity of Philosophical Experience*: there is an excuse for a Descartes, but no excuse for a Cartesian. There is an excuse for a Berkeley or a Hume, but no excuse for a revival of Berkeley and Hume after their philosophies have proved utterly barren and sterile. If the best method of refuting a false philosophical system is to explain it clearly and follow it through to its logical conclusions, Professor Stace has written an excellent refutation of Phenomenism. I fear that the author, by his clarity and logical presentation, destroyed what he set himself to defend. It is not possible to have a phenomenistic metaphysics—either no phenomenism or no metaphysics. One must make his choice and abide by the consequences. WILLIAM WADE.

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## PREFACE TO AN EDUCATIONAL PHILOSOPHY

I. B. Berkson

*Columbia Univ. Press, New York, 1940, pp. xviii + 250, \$2.50*

Dr. Berkson's work constitutes a brief exposition of the social and educational philosophy of John Dewey and W. H. Kilpatrick. In the preface the author states: "As is evident throughout, my educational views have been largely shaped by the teachings of these two leaders of American educational thought." In his one major deviation he departs from the masters' pragmatic repudiation of anything like fixed ultimate purposes in education, and comes closer to H. O. Rugg in holding that definite, concrete goals be set up as educational objectives. He guards against the charge of over-theorizing by requiring that the "ideal," i. e., the goal be worked out in terms of the "real," i. e., actual conditions.

In the main he follows the Columbia University liberals' favorite chain of thought in showing democracy as developing from a merely political concept to one that pervades economics, adopting their interpretation that this calls for collectivism. He then shows how education must so affect children that they will no longer feel the need of private property and will work for collectivism. In conclusion he asks with George S. Counts, "Dare the School Build a New Social Order?" But in supposing that collectivism will satisfy the human race, he is setting up an "ideal" that not only cannot be found in the "real," but also stands opposed to sane realism.

Dr. Berkson goes one step behind most liberals in tracing the genesis of democracy to the religious, Judæo-Christian concept of the dignity and rights of the individual man, based on his creation by God and his possession of an immortal soul. But he shows the positivistic weakness of the liberal point of view in treating this solitary, satisfactory basis of human rights as a mere stage in the development of the concept of democracy rather than as the underlying basis of human rights for all time. He devotes only one sentence to the development of this theory by the scholastics, and makes no mention of its direct application to political science by the seventeenth century Jesuit writers, Bellarmine and Suarez.

In one of the introductory chapters the author takes issue with Dr. R. M. Hutchins for his now famous suggestion that metaphysics be made the center of our educational system, and by merely repeating Dewey's attack of three years ago, does quite as well as his master. Hutchins' failure to develop the full import of his suggestion has left him a rather easy prey for the liberals. CHARLES M. O'HARA.

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## A CATALOGUE OF RENAISSANCE PHILOSOPHERS (1350-1650)

compiled by . . . [students of Marquette Univ.] . . .

under the direction of John O. Riedl, Ph. D.

*Marquette University Press, Milwaukee, 1940, pp. xi-179*

One of the greatest wants of the modern historian of philosophy is particular bibliographical literature; there are few bibliographies even for restricted periods.

The present work is not a bibliography, as indeed the title indicates. But it is a complete list of philosophers grouped into 102 various classes in which, so far as possible, the unities of time, place, and idea have been preserved; with each man or school is a list of the works, with thumb-nail sketches of the life of the author and his relations to other men of the period. The work is completed by a table of universities with date of foundation and name of founder(s), general bibliography, and index.

From the description alone, it is no difficult conclusion that this book is of great service to the individual scholar, and surely should be in every library. The compilers have taken the name Renaissance in its most general sense—and indeed, every day it becomes more difficult to think of the renaissance as anything but the manifold development in literature and the sciences of many mediaeval currents.

The book, too, is a monument to Professor Riedl and the philosophy department of Marquette University. When a group of students can be taught the techniques of discovering source-material in such fashion that the combined product of their labors will be of value to scholars in general, there is evidence of a high ideal of instruction. There is something appropriate, then, in the Catalogue's having been dedicated to Professor Edward A. McGrath, S.J., Ph.D., the head of the department. BERNARD J. MULLER-THYM.

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## PHILOSOPHY IN THE POETRY OF EDWIN ARLINGTON ROBINSON

Estelle Kaplan

*Columbia University Press, 1940, pp. 144, \$2.25*

In search of the sources of Robinson's formal philosophy, Miss Kaplan finds them to be Schopenhauerian Pessimism and Roycean Idealism. Royce (*The Spirit of Modern Philosophy*) was the standard author at Harvard during Robinson's years there. She finds traces of Spinoza also. Tempering this eclecticism are the influences of puritanism (Hawthorne), transcendentalism (Emerson and Thoreau), and pessimism (Hardy), colored powerfully by the writer's inherited New England temperament. After his formative period, of which sentimentalism is the besetting sin, a sardonic humor pervades all of Robinson's work. This synthesis, Miss Kaplan concludes, results in a consistent view of man's relations to God and the universe.

Whether Miss Kaplan's interpretation is always correct, the reader must decide for himself. Each is his own pope in that particular field of literature. We merely note that in one important detail, the significance of the character Zoe, Miss Kaplan sees fit to reject—or highly qualify—an explicit statement by the author, a statement still on record. Similarly, she places small value on an authenticated remark by Robinson to the effect that he was little influenced by Royce's philosophy. This cavalier treatment of writers by psychological critics is a growing trend.

Miss Kaplan's approach is objective for the most part; her presentation is orderly; her general inferences may well be correct although the premises on which they rest seem at times more slender than they might be. Finally, the style is readable though not colorful, and the book is adequately documented. LOUIS F. DOYLE.